Appendix A-9:
RY19 MassQEX Reports User Guide

Supplement to:
RY2019 EOHHS Technical Specifications Manual
for MassHealth Acute Hospital Quality Measures (12.0)

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Section 1: Introduction

The MassHealth Hospital Pay-for-Performance (P4P) Program provides hospitals with various quality reports that contain feedback on status towards achieving performance as defined each EOHHS Acute RFA contract rate year. Starting December 2019, the EOHHS contractor (Telligen) will transition dissemination of all MassQEX year-end reports via the secure portal to expedite access and hospital management of their MassHealth quality reports.

This MassQEX Reports User Guide provides information on the content of your reports and how to interpret the results. This User Guide should be used in conjunction with the applicable versions of the EOHHS Technical Specifications Manual applicable to Acute RFA rate year.

A. **MassHealth Quality Measures.** Effective with Acute RFA2019, MassHealth transitioned to quality requirements that include a combination of process and outcome measures listed in Table A below.

Table A: RY2019 MassHealth Quality Measures

Metric ID #	Measure Name	Report Data Periods	Improvement Noted As
MAT-4	Cesarean Birth, NTSV	07/01/2018 – 12/31/2018	Lower is better
NEWB-1	Exclusive breast milk feeding	07/01/2018 – 12/31/2018	Higher is better
CCM-1	Reconciled medication list at discharge	07/01/2018 – 12/31/2018	Higher is better
CCM-2	Transition record with specified data elements at discharge	07/01/2018 – 12/31/2018	Higher is better
CCM-3	Timely transmission of transition record	07/01/2018 – 12/31/2018	Higher is better
HD-2	Health Disparities Composite	07/01/2018 – 12/31/2018	Lower is better
PSI-90	Component 1: Patient Safety and Adverse Events Composite	10/01/2013 – 09/30/2015	Lower is better
HAI's	Component 2: Healthcare Associated Infections (Central Line-Associated Bloodstream Infection, Catheter-Associated Urinary Tract Infection, Methicillin-Resistant Staphylococcus Aureus bacteremia, Clostridium Difficile Infection, Surgical Site Infections (colon & abdominal hysterectomy)	01/01/2015 – 12/31/2016	Lower is better
HCAHPS	Hospital Consumer Assessment Healthcare & Provider System	01/01/2016 – 12/31/2017	Higher is better

The MassQEX portal will post all hospital quality reports for the continued hospital reported process measures (perinatal, care coordination, health disparity measures) and the newly introduced EOHSHS collected safety outcome (PSI-90, HAI) and patient experience (HCAHPS) outcome measures. Pursuant to Section 7.4 of Acute RFA19 MassHealth quality year-end reports are generated using data periods in Table A above. The "Improvement Noted As" column refers to performance direction associated with each measure report result.

B. **Quality Reports Audience**

- *EOHHS Key Representatives* – The primary audience for the MassQEX reports is the hospital key quality representative identified in the Acute RFA contract as the EOHHS liaison for all MassHealth communication regarding correspondence on performance progress. Key representatives are responsible for ensuring their MassQEX Hospital Users access the Case List and Year-End Reports for review in a timely manner.

- *MassQEX Hospital Users* - Only the authorized hospital registered users can access quality reports via the portal on the Hospitals behalf. As of 10/1/2019, MassHealth expanded hospital account limits to a maximum of five users to expedite access to reports.

- *MassHealth Notices* – All hospitals are notified via the MassQEX listserv and EOHHS business mailbox when MassQEX reports are posted in the secure portal.

  Contact the MassQEX Helpdesk at (844) 546-1343 or massqexhelp@telligen.com for questions about the Hospital quality reports audience.

C. **MassQEX Report Types.** Below are the types of reports that will be posted in the secure portal as a downloadable PDF file except for the drill-down reports which are posted in HTML format.

Table B: MassQEX Hospital Report Types

Report Name	Report Type
Medical Records Case List	One report displays records selected for applicable quarter validation
Year-End Validation Results	One report displays overall agreement rate on first three quarters of data
Year-End Validation Record Detail	One report displays case-level data element reliability results
Year-End Data Element Comments	One report displays educational comments on mismatches.
Year-End Measure Results	One combined report with overall and quarterly results on two separate tables
Year-End HD2 Composite Results	One report displays overall results and missed opportunity counts
HD2 Drill-down	One report displays case-level detail on missed opportunity
Safety Outcomes Report	One combined report with PSI-90 and HAI overall results on two separate tables
PSI-90 Drill-down	One report displays case-level detail on PSI observed event
HCAHPS Measure Results	One report displays top box responses for each survey dimension

Hospitals are responsible for downloading and reviewing all of the MassQEX quality reports listed in Table B above. MassQEX will post the following ten (10) reports that apply to RY19 measure data period:

- *Process Measure Reports* – a total of seven (7) year-end reports that include four validation reports (case list, overall results, record detail, data element comments); one year-end measure report; one year-end health disparity report plus one HD2 drill-down report.

- *Safety Outcome Measures Report* – a total of two (2) reports that includes one consolidated report with the PSI-90 and HAI measure results, plus one PSI-90 drill down report.

- *Patient Experience Outcome Report* - a total of one (1) report with HCAHPS measure results.

- *HIPPA Compliance* - several reports display protected health information that may be disclosed only with authorized individuals within the hospital in accordance with HIPAA requirements.

D. **Report Posting Schedule**

- *Case List Requests* - are posted within 14 calendar year days following the portal close dates of each quarter reporting period (Q1, Q2, Q3) published in Section 1 of EOHHS Technical Specifications Manual.

- *Validation Reports* - are posted after all three quarters of validation is completed.

- *Year-End Reports* - are posted for all process and outcome measures by December of each year.

- Refer to RY19 EOHHS Release Notes (v12.2) for other detail on timing of portal posting schedule.

E. **Accessing MassQEX Reports**

- MassQEX portal reports system will Go-live December 11, 2019 with RY19 Year-End Reports.

- Hospital Users can log-in via the portal homepage https://massqex-portal.telligen.com/massqex/ Under the "Getting Started" header select "MassQEX Year-End Reports" link and you will see the page for the specific hospital linked to the user.

- Contact the MassQEX Help Desk massqexhelp@telligen.com or (844) 546-1343 for all questions related to the MassQEX portal reports.

Section 2: MassHealth Quality Report Descriptions

Each MassQEX report includes a standardized header content (hospital name, provider ID, report name, data period) pertinent to facilitate Hospital access, tracking and management of documents.

A. MassQEX Process Measure Reports. MassQEX portal will post various quality reports pertinent to the hospital reported process measures (perinatal, care coordination, health disparity) listed in above Table A.

1) Medical Record Case List: Displays the list of cases identified from the hospital quarter submission data files that have been selected for chart validation. Below is a description of this report content.

Table 1: MassQEX Case List Report Content

Column Name	Description
Patient Name	Last and first name identified from hospital files submitted to the MassQEX portal
Medical Record #	7 to 9 digit number identified from hospital files submitted to the MassQEX portal
Admit Date	The MM/DD/YY values in hospital files for quarter discharge period submitted
Discharge Date	The MM/DD/YY values in hospital files for quarter discharge period submitted
Date of Birth	The MM/DD/YY values in hospital files for quarter discharge period submitted
Metric ID:	Acronym identifier for the specific MassQEX quality measure data for chart review.
MP Validation Control	A unique identifier generated by the MassQEX portal for cases selected for validation.

2) **Case List Posting Schedule:** Case list requests for chart validation apply to the first three quarters (Q1, Q2, Q3) of calendar year data reporting only. Case lists are posted following the portal close dates as described in Section 1.D of this User Guide.

3) Hospital Notifications: Hospitals will be notified via the MassQEX listserv system when the case list is posted in the portal. All Hospital staff described in Section 1.B of this User Guide, are responsible for communicating chart request requirements to their Medical Records Department. IMPORTANT: The case list contains protected health information that may be disclosed only with authorized individuals within the hospital in accordance with HIPAA requirements.

4) Chart Submission Requirements: Hospitals must adhere to following instructions for submitting records:

a. Hospital must submit a copy of the entire medical record for the admission/discharge dates of *each* member identified in the record case list.

b. Each paper medical record must also include information on MassHealth unique identifiers for "Race and Hispanic Indicator" data elements either within the record or as a screen print from the hospital's registration system.

c. <u>For the CCM-2 measure</u>: In addition to the complete medical record submitted, hospitals can submit documentation in the form of a list of document names of what comprises the transition record given to the patient or caregiver(s) or site of care for a transfer for each case selected for validation with their submission of medical records for each quarter.

d. **Mailing Instruction**: Copies of all medical record documents must be mailed to:

Telligen
Attention: MassHealth Quality Exchange (MassQEX)
800 South Street (Suite 170)
Waltham, MA 02453

e. **Submission Due Date:** Each posted case list includes a deadline by which MassQEX must receive all case list records. Copies of case records <u>not received</u> by the due date listed will be deemed as failing data validation**.** Refer to the EOHHS Technical Specifications Manual (Section 6.A) for detail on chart requirements. Contact the MassQEX Helpdesk at (844) 546-1343 for questions about the submission of medical record case lists.

5) **Year-End Data Validation Report:** This report provides the overall agreement rate results based on three quarters of case records selected for chart validation. Below is a description of this report content.

Table 2: MassQEX Overall Validation Report Content

Column Name	Description
Validation Period	Identifies the applicable quarter period data reviewed
Scored item agreement	The EOHHS abstraction total number of scored item agreement applicable to the quarter discharge period
Total scored items rated	Total number of scored items rated in each quarter discharge period
Agreement rate	Proportion of scored items in agreement divided by total scored items rated
Overall results	This row displays the overall agreement rate for the total scored item agreement and total score items rated.
Upper confidence limit (UCL)	Statement above report table displays the upper bound of the 95% confidence interval calculation and the pass/fail designation

Report Display Code: Other entry codes displayed under a column indicate the following,

- NC = No cases were submitted by the hospital
- INC = Incomplete case data files were submitted for the measure category
- INVALID = Data completeness was not met

6) **Year-End Validation Record Detail:** This report provides more detail on case-level data element agreement rate across measures selected for validation by quarter discharge period. Below is a description of this report content.

Table 3: MassQEX Validation Record Detail Report Content

Column Name	Description
Discharge Period	Identifies the specific quarter period that detail applies
Metric ID	Acronym identifier for the specific MassQEX quality measure data that was validated
Medical record #	7 to 9 digit number identified from submitted hospital files
Validation Control #	Unique identifier generated by MassQEX portal on cases selected for validation
Admit Date	The MM/DD/YY values in hospital files for quarter discharge period submitted
Discharge Date	The MM/DD/YY values in hospital files for quarter discharge period submitted
Data element reliability ratio	Scored items in agreement divided by the total scored items rated for the metric ID

IMPORTANT: This report displays protected health information that may be disclosed only with authorized individuals within the hospital in accordance with HIPAA requirements.

7) **Year-End Validation Data Element Comments:** This report provides educational feedback on data element mismatches found between the Hospitals versus EOHHS abstraction standard for case records submitted for the calendar year. Below is a description of the MassQEX report content.

Table 4: MassQEX Data Element Comments Report Content

Column Name	Description
Discharge Period	Identifies the specific quarter period that comment applies
Validation Control #	Unique identifier generated by MassQEX portal on case selected for validation
Element Label	Data element that resulted in mismatch between hospital submission and EOHHS abstracted value
Hospital Abstraction	Identifies the hospital data element value as submitted in the data XML data file
EOHHS Abstraction standard	Identifies the EOHHS data element re-abstraction value
Mismatch reason	Reason for mismatch as described in EHS Technical Specs Manual
Comments	Educational detail supporting mismatch result

All year-end validation reports listed above should be reviewed with the hospital staff involved in data abstraction to identify opportunities for improving data reliability of hospital reported process measures.

8) **Year-End Measure Report:** This report consists of one report that displays the overall and quarterly measure rates on two separate tables. Below is a description of this report content.

Table 5 MassQEX Overall Measure Reports Content

Column Name	Description
Metric ID#	Acronym identifier for the specific MassQEX quality measure data.
Cases Submitted	Total number of cases in hospital files submitted to portal for the calendar year
Cases in Numerator	Total number of cases in hospital files that met the population inclusion
Cases in Denominator	Total number of cases in hospital files that met the eligible population criteria
Hospital Measure Rate	Total number of cases that met the numerator inclusion specification divided by the total number of cases that met the measure eligibility criteria for denominator inclusion

Overall Results display the aggregate measure rates calculated from all calendar year reported data that met each measures numerator and denominator population.

Quarterly Detail Results display measure rates calculated separately on each quarter of data submitted. Column name header, entry notes and description apply to both reports except for "Cases Submitted" column header which is displayed in overall results only.

Report Display Code: Other entry codes displayed under a column indicate the following,

- NC = No cases were submitted by the hospital
- NR = No rate calculated if no cases were submitted or when no cases met denominator for the measure

6) Year-End Health Disparity Composite Report: This report combines the overall results on racial comparison and reference group rates, between group variance values, plus a summary of missed opportunity counts from all measures data reported for calendar year. Below is a description of this report content.

Table 6: MassQEX Health Disparity Composite (HD-2) Report Content

Column Name	Description
R/E Comparison Group	The 5 racial/ethnic groups defined in EOHHS Technical Specs Manual
Reference Group	Total cases of all 5 racial groups in hospital files submitted to the portal
Numerator	Total cases desired care was not given for comparison and reference groups
Denominator	Total cases that met eligible criteria for comparison and reference groups
Rate	The numerator divided by the denominator for comparison and reference groups
Comparison BGV	The degree of variance in care contributed by each racial group
Final BGV	The degree of variance in care contributed by all combined groups
Composite Metric ID	The MassQEX process measures that make up the disparity composite
Total Missed opportunity	Total cases resulting in missed opportunities on each reported measure
Totals	Total count of missed opportunities by each racial comparison group
Unknown Group:	Total count of cases in denominator excluded from calculations

Report Display Code: Other entry codes displayed under a column indicate the following,

- Blank = No cases available
- NR = No rate calculated (less than one racial comparison group in reported data)

The HD-2 composite measure is created from the hospitals reported process measures and should be reviewed in conjunction with the individual process year-end measure report results. The MassQEX portal includes an additional HD-2 drill-down report for hospitals to identify each missed opportunity case by measure ID that was displayed in their HD-2 Composite Report. Below is information on how to access the drill down report.

7) **Health Disparity (HD-2) Drill-Down Report:** This report provides case-level detail on missed opportunity counts displayed on the year-end health disparity report. Case level information is provided to facilitate identification of charts for further review by the hospital. Below is a description of this report content.

Table 7: MassQEX HD2 Drill-Down Report Content

Column Name	Description
Patient Name	Last and first name identified from hospital files submitted to the MassQEX portal
Medical Record #	7 to 9 digit number from hospital files submitted to the MassQEX portal
Admit Date	The MM/DD/YY values in hospital files for calendar year period submitted
Discharge Date	The MM/DD/YY values in hospital files for calendar year period submitted
Date of Birth	The MM/DD/YY values in hospital files for calendar year period submitted
Metric ID	Acronym identifier for the specific MassQEX quality measure data.

Hospitals should refer to Section 3 of this MassQEX Reports User Guide for additional detail on how to interpret the HD-2 composite missed opportunity report results column fields described on Table 6 above.

IMPORTANT: This report displays protected health information that may be disclosed only with authorized individuals within the hospital in accordance with HIPAA requirements. This drill-down report is displayed in HTML web page browser format for viewing only and cannot be downloaded for printing. Contact the MassQEX helpdesk at massqexhelp@telligen.com or (844) 546-1343 for assistance with interpreting the content of the HD-2 drill down report.

The Hospital should review all process measure reports (maternity, newborn, care coordination, and health disparity) described under this section with the appropriate hospital staff and/or third-party data vendors involved in MassHealth P4P measures data collection and reporting. Please submit any questions related to measure calculations to the MassQEX Customer Support Help Desk by email at massqexhelp@telligen.com.

B. MassQEX Safety Outcome Measures

In RY19, EOHHS introduced the new PSI-90 Composite and five Healthcare-Associated Infection (HAI) measures listed in Table A of this User Guide. The MassQEX safety outcome measures report contains separate measure results displayed on two distinct tables. Below is a description of each report content.

1) **PSI-90 Composite Report**: This report displays results detail on each patient safety observed event, the overall composite value and a preview z-score value. Below is a description of the report content.

Table 8: MassQEX PSI 90 Composite Report Content

Column Name	Description
PSI Components	Lists the ten AHRQ quality indicators included in the PSI-90 composite calculation.
# Events	Number of cases that met the numerator inclusion criteria (event outcome) for each PSI component.
# Eligible Discharges	Number of discharges that met the denominator inclusion criteria (eligible population at risk) for each PSI component.
Observed Rate	Total event outcomes divided by the total eligible population at risk displayed per 1000 eligible discharges. Results are rounded to two decimals.
Expected Rate	Total expected events divided by total eligible population at risk displayed per 1000 eligible discharges. Results are rounded to two decimals.
Risk-Adjusted Rate	The Observed Rate divided by expected rate times the reference population rate displayed per 1000 eligible discharges. Results are rounded to two decimals.
Smoothed Rate	Weighted average of the hospitals risk-adjusted rate and the HCUP reference population rate using the reliability weight. The smoothed rate is the hospitals expected performance with a larger population of patients displayed per 1000 eligible discharges. Results are rounded to two decimals.
PSI-90 Composite Value	The weighted average of all ten indicators that have been risk-adjusted and reliability-adjusted. Results are displayed to six decimals. This result is used to determine your PSI-90 Winsorized z-score.
5^{th} Percentile	Determined based on the distribution of all eligible hospitals with a PSI-90 composite value result. Results are displayed to six decimals.
95^{th} Percentile	Determined based on the distribution of all eligible hospitals with a PSI-90 composite value result. Results are displayed to six decimals.
Winsorized Measure Result	If the PSI-90 value falls below the 5^{th} percentile, the Winsorized result is equal to the 5^{th} percentile value. If the PSI-90 value falls above the 95^{th} percentile, the Winsorized result is equal to the 95^{th} percentile value. If your hospitals PSI-90 composite value falls between the 5^{th} and 95^{th} percentiles, then this value is your Winsorized measure result. Winsorized results are displayed to six decimals.
Winsorized z-score	The z-score reflects how many standard deviations your hospitals PSI-90 composite value is away from the Mean result. A negative z-score indicates the Hospitals result was below the Mean whereas a positive z-score indicates the Hospitals result was above the Mean. Results are displayed to six decimals.

Report Display Code: Other entry codes displayed under a column indicate the following,

- Blank = No cases identified (hospital not open for at least 12 months of measurement period)
- NRC = No result computed (less than 3 eligible discharges for the PSI component).

The new RY19 PSI-90 Composite report provides information specific to the MassHealth population using the most readily available AHRQ software version posted at the time of Acute Hospital RFA19 contract release. This report should be reviewed in conjunction with the PSI-90 drill-down report described in Table 9 below.

Refer to Section 3 of this MassQEX Report User Guide for detail on Winsor z-score calculation methods described on Table 8 above and understanding MassHealth PSI-90 report discrepancies.

Refer to Section 7 of the RY19 EOHHS Technical Specifications Manual (v12.0) for detail on PSI-90 claims working file definitions, calculation methods, and AHRQ software versions used to compute this measure.

2) PSI-90 Drill-Down Report

This report displays the specific discharges that met the total number of observed events (numerator column) on your PSI-90 Composite Report by each component indicator. The drill-down report will display information for one indicator at a time. Below is a description of the report content.

Table 9: MassQEX PSI 90 Drill-Down Report Content

Column Name	Description
PSI Component	Screen text above the report will indicate the specific PSI component name that the case level information is provided on.
Case number	Case identifier assigned by MassQEX to each observed event.
Claim No.	10 digit MassHealth claim account number (not same as SSN)
Date of Birth	Patient MM/DD/YY values in MMIS hospital claims files.
Admission Date	The MM/DD/YY values in MMIS hospital claims files for measurement period.
Discharge Date	Patient MM/DD/YY values in MMIS hospital claims files for measurement period.
Trigger DXPR	Indicates which of the ICD-9 diagnoses or ICD-9 procedures were counted as PSI outcome and included in the numerator. If the MMIS hospital stay record has multiple diagnosis or procedure codes for the same PSI outcome, all the codes will be included in this field but the hospital record discharge is only counted once for the PSI measure. If a hospital stay discharge qualified for two separate PSI measures, the hospital record will be counted once for each of the PSI component indicators.
MS_DRG	Code assigned by the CMS Medicare severity diagnosis related group software v33
ICD-9-CM Diagnosis (DX_1 to DX_25)	Identifies ICD-9 diagnosis codes DX1 through DX25 respectively in claims file. Additional ICD-9 e-codes will be displayed as DX26 to DX37 if and when identified in the claims file.
ICD-9-PCS Procedure (PR_1 to PR_25)	Identifies ICD-9 procedure codes PR1 through PR25 respectively in claims file
Present on Admission (POA)	Present on Admission flag for Diagnoses 1 through 37 respectively that include: Y=Yes; N=No; U=Unknown; W=Clinically undetermined, and 1= Blank. The POA value of N or U is required to be counted as a PSI outcome and included in the numerator. N/A = Not applicable (POA flag not reported; has value other than ones listed).

This new RY19 PSI-90 drill-down report provides case-level information on numerator events to facilitate your hospitals identification of charts for further review.

IMPORTANT: This report displays protected health information that may be disclosed only with authorized individuals within the hospital in accordance with HIPAA requirements The PSI-90 drill-down report is displayed in HTML web page format for viewing only and cannot be downloaded for printing.

Please contact the MassQEX helpdesk at massqexhelp@telligen.com or (844) 546-1343 for assistance with interpreting the content of the PSI-90 drill-down report

3) Healthcare-Associated Infection Measures Report: This report displays the overall number of observed infections, standard infection ratios and preview z-score result. Below is a description of the report content.

Table 10: MassQEX HAI Measures Report Content

Column Name	Description
HAI Components	List MassQEX assigned metric ID and each HAI measure name.
# Observed Infections	Number of reported infection events for the specific ward locations applicable to the HAI measure as referenced in RY19 EOHHS Technical Specifications Manual. For SSI the sum of reported infection events across colon and abdominal hysterectomy procedures performed in the hospital. Result is displayed to three decimals.
# Predicted Infections	Calculated by CDC using the standard population from the baseline period of 2015. All results are rounded to three decimals. For the HAI-1 (CLABSI) and HAI-2 (CAUTI) the CDC calculates predicted infections using binomial regression models that are risk-adjusted based on patient care locations. For HAI-3 (MRSA) and HAI-4 (CDI) the CDC calculates number of predicted infections based on patient days using binomial regression models For the HAI-5 (SSI's) the CDC derives the number of predicated infections for each surgical procedure using logistic regression models.
SIR (Standard Infection Ratio)	The CDC calculates an SIR by dividing a hospital's reported number of HAI's by the predicted number of HAI's. For the SIR to be calculated the hospitals number of predicted infections must be greater than or equal to one. For the HAI-4 (C. Difficile) the CDC will not calculate an SIR if the CDI community-onset prevalence rate for the hospital is above the CDC designated threshold. The SIR result is displayed to three decimal. This result is used to determine each HAI measure Winsorized z-score.
5^{th} Percentile	Determined based on the distribution of all eligible hospitals with a given measure result. Results are displayed to three decimals.
95^{th} Percentile	Determined based on the distribution of all eligible hospitals with a given measure result. Results are displayed to three decimals.
Winsorized Measure Result	If the HAI measure value falls below the 5^{th} percentile, the Winsorized result is equal to the 5^{th} percentile value. If the HAI measure value falls above the 95^{th} percentile, the Winsorized result is equal to the 95^{th} percentile value. If your hospitals HAI value falls between the 5^{th} and 95^{th} percentiles, then this value is your Winsorized measure result. Winsorized results are displayed to six decimals.
Winsorized z-score	The z-score reflects how many standard deviations your hospitals PSI-90 composite value is away from the Mean result. A negative z-score indicates the Hospitals result was below the Mean whereas a positive z-score indicates the Hospitals result was above the Mean. Winsorized results are displayed to six decimals.
Average Winsorized Z-Score	The average of the hospital's HAI component measures Winsorized Z-scores.

Report Display Code: Other entry codes displayed under a column indicate the following,

- Blank = No data was reported in the NHSN surveillance system for the measure
- NRC = No results computed by CDC if number of predicted infections is less than 1.0 or when the hospital reported insufficient data to CDC.

This new RY19 MassHealth HAI report reflects a snapshot of each infection measure data extracted from the MassHealth NHSN Group system database using a specific freeze date.

Refer to Section 3 of this MassQEX Reports User Guide for more detail on Winsor z-score calculation methods described on Table 10 above and understanding MassHealth HAI report discrepancies.

Refer to Section 8 of the RY2019 EOHHS Technical Specifications Manual (v12.0) for more detail on measure collection and calculation rules that apply to the HAI measure report.

B. MassQEX Patient Experience Measure Results

In RY19, EOHHS introduced the new hospital patient experience and engagement measure listed in Table A of this User Guide. Below is a description of report content.

Table 11: MassQEX HCAHPS Report Content

Column Name	Description
Metric ID #	CMS naming convention for individual HCAHPS measures in the Hospital Compare archived database.
Survey Dimension	General description of individual HCAHPS survey dimension that is comprised of one or more survey questions.
Top Box Response Rate	Answer percentage as displayed in the top box response. Rate is displayed as whole number rounded to nearest integer.
# Completed Surveys	Number of completed surveys as reported for the measurement period and posted on Hospital Compare archived database.

Report Display Code: Other entry codes displayed under a column indicate the following,

- Blank = No survey dimension data were posted on Hospital Compare.
- NR = No rates were calculated for top box responses.

This new RY2019 MassHealth HCAHPS report combines baseline and comparison year data period results into one report on two distinct tables for the first year of the report only. All subsequent rate years will display the comparison year period only. This report displays results on the seven HCAHPS survey dimension top box response rates obtained from the archived Hospital Compare data files.

Refer to Section 3 of this MassQEX Report User Guide for other information about understanding MassHealth HCAHPS report discrepancies.

Refer to Section 9 of the RY2019 EOHHS Technical Specifications Manual (v12.0) for more detail on MassQEX measure collection and calculation rules that apply to the HCAHPS measure report.

Section 3: Understanding MassHealth Report Results

The MassQEX year-end reports should be reviewed with the hospital staff involved in data collection and reporting of all process and outcome measures. Year-end measure results constitute preliminary data that must meet MassHealth performance scoring criteria to be eligible for incentive payment determinations.

A. MassHealth Process Measure Report Discrepancies

1) **Interpreting Validation and Rate Results**

a. *Overall Validation Report*: Hospitals are considered to have passed validation if the overall validation results, is equal to or greater than 80 percent based on the upper confidence limit across first three quarters of calendar year data submitted. Refer to data completeness detail related to passing validation.

b. *Data Completeness*: The overall validation results also provides information on data completeness reporting requirement. An "INVALID" entry indicates that overall results were adjusted when data completeness was not met across all three quarters. Incomplete reporting of measures data (e.g.: partial, missing) across three quarters provides insufficient information to determine that the data reliability standard has been met across all of the measures the hospital is eligible to report on. Refer to Section 2 and 6 of the RY19 EOHHS Technical Specifications Manual (12.0) for details on data completeness requirements.

c. *Requesting Re-Evaluation of Validation Results*: Hospitals can request review of results for any quarter that falls below 80 percent. Hospitals have ten (10) business days from the date of original MassQEX listserv notification to Hospital Users of portal reports availability to submit a request for re-evaluation. See the RY19 EOHHS Technical Specifications Manual (Section 6.C) details on how to request a re-evaluation.

d. *Measure Rate Report Discrepancy*: Differences between the number of cases submitted by the hospital and the number of cases in the denominator are due to application of MassQEX portal data integrity filters.

2) **Understanding Health Disparity Composite (HD-2) Results**. This report contains interrelated results that are displayed in two distinct sections. The upper portion of the report (Figure 1.A) displays overall results on variance of care across racial comparison groups and the lower portion of the report (Figure 1.B) displays which measures contributed to missed opportunities by each racial comparison group. Below is a mock example of actual content for each section followed by an explanation of how to interpret results.

Figure 1.A - HD2 Composite Report (Mock Overall Result)

R/E Comparison Groups	Hispanic	Black/AA	Asian	White	Other	Hospital Reference Group
Numerator	228	87	45	503	20	883
Denominator	670	334	112	1117	40	2273
Rate	34%	26%	40%	45%	50%	39%
Comparison BGV	0.000684	0.002407	0.000009	0.001879	0.000219	N/A
Final BGV	--	--	--	--	--	0.005198

Figure 1.B – HD2 Composite Report (Mock Missed Opportunity Result)

Composite Metric ID	Hispanic	Black/AA	Asian	White	Other	Total Missed Opportunities
NEWB1	1	1		1		3
MAT4	1	1		1		3
CCM1	5	1	1	5	1	13
CCM2	132	49	24	288	12	505
CCM3	85	29	19	195	7	335
TOTALS	228	87	45	503	20	883
Unknown Group	--	--	--	--	--	54

3) **Interpreting HD-2 Overall Results.** The following provides information on how to read results in the upper portion of the report (Figure 1.A):

   a. Comparison and Reference Group Rates: The report displays the numerator rate (instances of care not given), the denominator rate (opportunity to receive desired care) for each racial comparison group and hospital reference group (all racial groups combined). A lower group rate indicates less missed opportunities occurred (better care).

   b. Comparison Group BGV: Each racial comparison group displays a BGV which contributes different information about variance in care. For example, a larger BGV value (0.002407) contributes more to the overall variance in hospital care than a group with a lower BGV (0.000009). Each comparison group BGV is weighted by the size of that racial comparison group compared to hospitals reference group size.

   c. Final BGV: Represents the degree of variance in care provided to comparison groups relative to the hospitals reference group. The BGV ranges from zero (0= no variation exists) to one (1.0 = variation does exist). Unlike the group rate, the final BGV does not tell us about the direction of improvement. The final BGV is also not significantly correlated size of the comparison groups the hospital reports on. Additional description on overall result description entries are in Section 2 Table 6 of this User Guide.

   d. Understanding Variance in Care: Interpretation of the final BGV must always be done in conjunction with the racial comparison group rates to the hospitals reference group rate. The degree of disparity contributed by each racial comparison group is based on both the difference between the comparison and reference group rate, and the comparison group population size.

      Example of Overall Results
      - Figure 1.A provides examples of racial comparison group BGV that are above and below the hospitals reference group rate, both of which contribute to the final BGV.
      - The Black/AA group example has a lower composite rate (26%) than the hospitals reference group rate (39%) thus a large BGV value (0.002407) that contributed to the final BGV (.005198).
      - The White group example has a higher composite rate (45%) a larger denominator population size than the reference group (39%) thus also contributing to a fairly large BGV (.001879).
      - This example illustrates that the Black/AA group received the desired care more frequently relative to the hospitals reference group, and when compared to the White group rate (received desired care less frequently). This suggest that targeting interventions with White Medicaid patients may reduce the hospitals overall variance (final BGV).
      - Another way to examine data is by summing all BGV values for non-White comparison groups (.003319) versus White group (.001879) to see which groups contributed most to the final BGV.

   e. Interpreting Results for Quality Improvement: Several considerations should be taken into account when interpreting your BGV results. Achieving a lower BGV is not necessarily correlate with improvement on a given process measure. Achieving a BGV of zero (0) does not indicate that desired care was given to all patients every time, *only* that there was no variance in care compared to the hospitals reference group.

      A hospital with overall poor quality (not giving desired care) may still obtain a low BGV as long as the degree of disparity across racial comparison groups is small. Likewise, a hospital with no improvement in process measure rates may still attain a better final BGV as long as the degree of disparity across racial groups is reduced.

4) **Interpreting HD-2 Missed Opportunity Counts.** This report displays detail on which process measures reported by the hospital contributed to racial comparison group numerator rates in overall results. The following provides information on how to read results in the lower portion of the report (Figure 1.B):

a. This report displays the total missed opportunities (counts) that occurred in the hospital for each measure and the number of cases that were attributed to a specific racial comparison group.

Example B (Missed Opportunity Counts)

- Figure 1.B displays the number of missed opportunities for Hispanic group on CCM-2 metric (n=132) relative to the total CCM-2 missed opportunities (n=505). Thus, the Hispanic group represents 26% of missed opportunities for the CCM-2 measure compared to other racial groups.
- Figure 1.B also displays the number of missed opportunities for White group on CCM-3 metric (n=195) relative to the total CCM-3 missed opportunities (n=335). Thus, the White group represents 58% of missed opportunity for the CCM-3 measure.

b. Hospitals can use total missed opportunity counts to detect patterns by patient groups or service dimensions represented by the measures that are contributing to overall variance in care (final BGV).

c. Additional detail on each number of missed opportunity comparison group cases can be found in your hospitals HD-2 drill down report described in Section 2 Table 7 of this User Guide.

Lastly, the HD-2 report is intended to supplement the individual process measure rates report and HD2 results must be reviewed in conjunction with the hospitals year-end process measure results. Contact the MassQEX help desk at massqexhelp@telligen.com if you need assistance on how to interpret your HD-2 report.

B. Interpreting Safety Outcome Measure Reports

The MassHealth safety outcome report includes a Winsorized result obtains using methods described below. Additional information on understanding discrepancies in PSI-90 and HAI report contents is provided below.

1) **Winsorization Method.** Winsorization is the transformation of all eligible hospital measure data values to a standard z-score using the steps described below.

a) *Winsorized Measure Result:* is obtained by creating a continuous rank distribution of all eligible hospital raw measure values that are truncated at the 5^{th} and 95^{th} percentiles to determine the relative position of where each measures value falls in the distribution. Each Hospital's winsor measure result is determined as follows:

i. If falls between minimum and 5^{th} percentile then it is equal to 5^{th} percentile
ii. If falls between 95^{th} percentile and maximum then it is equal to 95^{th} percentile
iii. If falls between 5^{th} and 95^{th} percentile then it is equal to Hospital's raw result.

b) *Winsor Z-score (Z_i):* is calculated for each safety outcome measure as the difference between the Hospitals Winsorized measure result (X_i) and the mean of Winsor measure results across all eligible hospitals ($\bar{X}$) divided by the standard deviation of the Winsorized measure result from all eligible hospitals data using the following formula:

$$\text{Winsor } \mathbf{Z_i \text{ score} = (X_i) - (\bar{X}) / SD\,(x_i)}$$

The Winsor z-score (for each safety outcome measure) reflects the distance between the hospitals measure result and the Mean measure result. The z-score also tells you how many standard deviations units a case is either above or below the Mean. The Winsorized z-score ranges from -3 to 3 standard deviations. For example:

- If the Z-score is 0, then the value for that case is equal to the Mean.
- If the Z-score is 3, then the value for that case is three SD above the Mean.
- If the Z-score is -3, then the value for that case is three SD below the Mean
- A negative Winsor z-score indicates the Hospitals result was below the Mean (better).
- A positive Winsor z-score indicates the Hospitals result was above the Mean (worse).

2) MassHealth PSI-90 Measure Report Discrepancy

The MassHealth PSI-90 measure reports are computed using a hospital stay file extracted from MMIS claims as described in Section 7 of RY19 Technical Specifications Manual (12.0). Thus the cases identified in the PSI-90 report results may not match the hospitals internal records for following reasons:

a) The claim submitted by the hospitals billing department differs from the Medicaid hospital stay file records, as defined in Section 7.B of the RY19 EOHHS Manual (v12.0).

b) Hospital measure results only reflect changes to final action paid MMIS and encounter claims data processed six months after the end of the discharges that apply to the measurement period.

c) The claim was amended and resubmitted by the hospital billing department *after* the final action claims run-out date, as defined in Section 7.B of the RY19 EOHHS Manual (v12.0).

d) The hospital should verify their discharge level reports against claims submitted to MassHealth by the hospital billing department to confirm these claims were submitted prior to the run-out periods cited above.

e) EOHHS does not permit hospitals to submit corrections related to the underlying hospital claims used to calculate the PSI measure results. Hospitals cannot add or resubmit claims, or correct claims coding errors that apply to the measurement period reports.

3) MassHealth HAI Measure Report Discrepancy

The MassQEX results for each HAI measure is extracted from the MassHealth NHSN Group database as described in Section 7 of RY19 Technical Specifications Manual (v12.0).

Thus the cases identified in the HAI report results may not match the hospitals CMS generated reports or NHSN reports for the following reasons:

a) The MassQEX report results were computed using different measurement data periods than the Hospitals CMS report or hospital internal reports extracted from NHSN surveillance system.

b) The CMS report data periods used to generate their HAI measure results may have used different criteria not available in the public domain for EOHHS vendor use (e.g.: CMS chart validation results, case minimum criteria, etc.).

c) The MassQEX report results were generated using different freeze dates than ones used in the Hospitals CMS report or hospital generated results archived in the NHSN surveillance system.

d) The hospitals corrections or edits to the underlying NHSN submitted HAI data, for a given data reporting cycle, was calculated after the MassQEX vendor dataset extraction freeze date.

e) Hospitals may not request recalculation of original MassQEX reports mailed based on hospital corrections or edits to underlying NHSN database. EOHHS will not re-run HAI reports to factor in such corrections or edits to NHSN.

f) EOHHS recognizes that NHSN Analysis Tool software calculation errors may be identified and are beyond the MassQEX vendor control. EOHHS will notify CDC of such incidents and continue to monitor for any corrections notices posted in the public domain.

C. MassHealth Patient Experience Measure Report Discrepancy

The MassHealth HCAHPS measure reports are computed using the Hospital Compare archived data files as described in Section 9 of RY19 Technical Specifications Manual (v12.0).

Thus MassQEX report results for the HCAHPS measure may not match the information in other CMS or national summary reports for the following reasons:

1) The MassQEX report results were generated using different data periods or different archived data file versions than the Hospital results posted on Hospital Compare

2) The MassHealth measurement data periods used to generate Hospital Compare may have used different criteria not available in the public domain for MassQEX vendor use.

3) The Hospitals corrections or edits to the underlying CMS submitted HCAHPS data, for a given quarter reporting cycle, were calculated after the MassQEX vendor year-end report run date.

4) The Hospital may not request recalculation of original MassQEX reports mailed based on hospital corrections or edits to national HCAHPS databases. EOHHS will not re-run reports to factor in such corrections.

5) EOHHS recognizes that HCAHPS calculation errors may be identified by CMS and are beyond the MassQEX vendor control. EOHHS will continue to monitor Hospitals Compare website for any corrections notices related to HCAHPS data posted in the public domain.

Contact the MassQEX at massqexhelp@telligen.com for questions on any Hospital measure report discrepancies.